

# BLOCK RETAINING SLATE FOR FACILITATING ENGAGEMENT AND ALIGNMENT OF BLOCKS

## RELATED APPLICATIONS

This Application is a continuation-in-part of U.S. Pat. application No. 08/290,601 filed Aug. 15, 1994, entitled "INTERCHANGEABLE SYMBOLIC LANGUAGE OVERLAY SYSTEM FOR PUSH BUTTON OPERATED DEVICE", which is a continuation-in-part of U.S. Pat. application No. 08/074,795 filed Jun. 10, 1993, now U.S. Pat. No. 5,391,078 issued Feb. 21, 1995, entitled "SYMBOLIC LANGUAGE TEACHING AND COMMUNICATIONS SYSTEM UTILIZING TACTILE PATTERN DISCRIMINATION", both of which are fully incorporated herein by reference.

## FIELD OF THE INVENTION

This invention relates to block retaining slates, and more particularly, to a block retaining slate for facilitating engagement and alignment of tactile recognition blocks.

## BACKGROUND OF THE INVENTION

Symbolic language teaching and communications systems, such as that disclosed in U.S. Pat. Nos. 4,880,384 and 5,391,078 include one or more blocks having at least tactily recognizable symbols, such as Braille characters. A block retaining slate or board is used in these systems, for engaging and arranging the blocks, for example, to create words, phrases, sentences or other combinations of symbols or characters. The block retaining slate typically includes a number of block engaging members, such as protrusions, for engaging with and holding the blocks.

One difficulty with the existing block retaining slates is the engagement and alignment of the blocks on the block retaining slate, particularly by a visually impaired individual. For example, the blocks are typically engaged with the block retaining slate in a friction fit with block engaging members and require the engaging region of the block to be aligned with the block engaging members. The block is then "pressed" onto the block engaging members. The arrangement of the engaging members and the prior art flat top region of the engaging members on the existing block retaining slates cause the blocks to slide along the top surface of the block retaining slate and results in significant difficulty aligning the blocks with the block engaging members. Thus, the existing block retaining slates require unnecessary effort and difficulty to engage or secure the blocks. Also, there is difficulty in aligning the blocks with other blocks on the retaining slate.

Accordingly, what is needed is a block retaining slate having engaging members with a rounded or semi-spherical shape to allow blocks, such as tactile recognition blocks, to be easily secured or engaged with the block retaining slate. A block retaining slate is also needed which has block engaging members arranged in a manner that allows for the individual blocks to be easily positioned and aligned with other blocks on the block retaining slate.

## SUMMARY OF THE INVENTION

The present invention features a block retaining slate for retaining one or more blocks, such as tactile recognition (e.g. Braille) blocks used in a symbolic language teaching and communication system, each block having an engaging region. The block retaining slate includes a base portion

having at least a first and second surface and a plurality of block engaging members arranged in a predefined pattern on the first surface, for engaging with the blocks. Each block engaging member includes a rounded block receiving region, such as a semi-spherical region, for receiving the engaging region of each block and facilitating engagement with the engaging region.

According to the preferred embodiment, the predefined pattern of the plurality of block engaging members are arranged in a plurality of groups of block engaging members so that each group of block engaged members corresponds to one of the blocks, for engaging the block. The block retaining slate includes a spaced region between each group of blocks engaging members. The spaced region between each group of block engaging members has a predetermined distance which is greater than a predetermined distance between each block engaging member within each group of block engaging members. This predefined pattern of groups of block engaging members having spaced regions between each group of block engaging members allows each block to be easily arranged and aligned proximate other blocks on the block retaining slate.

In one preferred embodiment, the predefined pattern of block engaging members includes at least one row of block engaging members and at least one column of block engaging members. Each group of block engaging members is defined by the intersection of one of the rows of block engaging members and one of the columns of block engaging members and is adapted to engage each block so that the blocks are aligned in predefined rows and columns. This preferred embodiment further includes the spaced region between each column of block engaging members so that each block engages a group of block engaging members in one of the columns of block engaging members and adjacent the spaced regions. This preferred embodiment further includes a ridge portion between each row of block engaging members so that each block engages a group of block engaging members in one of the rows of block engaging members and adjacent the ridge portions.

## BRIEF DESCRIPTION OF THE DRAWINGS

These and other features and advantages of the present invention will be better understood by reading the following detailed description, taken together with the drawings wherein:

FIG. 1 is a top view of a block retaining slate having blocks arranged thereon according to the present invention;

FIG. 2 is a cross-sectional view of FIG. 1 taken along lines 2—2 of the rows of block engaging members on the block retaining slate according to one embodiment of the present invention; and

FIG. 3 is a cross-sectional view of FIG. 1 taken along lines 3—3 of columns of block engaging members on the block retaining slate according to one embodiment of the present invention.

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

The block retaining slate 40, FIG. 1, according to the present invention is used with blocks 10, such as tactile recognition (e.g. Braille) blocks used, for example, in a symbolic language teaching and communication system such as that disclosed in U.S. Pat. Nos. 4,880,384 and 5,391,078 and incorporated herein by reference. The blocks 10 are engaged with and arranged on the block retaining